

# PHENIX WEEKLY PLANNING



8/6/2009  
Don Lynch

# This Week 8/3-8/7

## Task

Start Date End Date

- Receive complete RPC3 N base, pitch support, lifting fixtures &  $\frac{1}{2}$  octant 7&8 vertical support Done Done
- Install ladder/access platform and work platforms for work above MuID steel (3 days) in Progress 8/7
- Move MuID plumbing rack on pedestal away From gap 5 in Progress 7/31
- Fan Tray replacement evaluation and priority plan Done Done
- Presurvey  $\frac{1}{2}$  octants at RPC Factory in progress 7/31
- Install Station 1 Scaffolding (3 days) Done Done
- Work permits for RPC3, MuTrigger/MuTr N&S Done Done
- Inspect Station 1 Scaffolding (1/2 day) Done Done
- cleaning and testing of MuTracker HV splitter boxes in progress 7/31
- Install MuTrigger Station 1 S FEE cable management 7/31 8/6
- Evaluate Gap 5 grout at Factory in progress 8/14
- Receive and test MuTrigger FEE's in progress 8/6
- ID/label gap 5 N cables & pipes and move out of gap 5 in Progress 8/6

# This Week 8/3-8/7

## Task

Start Date End Date

- Survey tapped holes on MuID5 steel and survey east and west RPC3 N support bases (3 days) 8/3 8/14
- Drill and tap MuID gap 5 steel top and north 8/3 8/14
- Install RPC3 N support base & grout (4 days) 8/3 8/14
- Install Station 3 N pitch control (unistruts rails) on pedestal and east and west gap 5 north walls and attach to support bases (tall column) 8/3 8/14
- Install MMS station 2/3 scaffolding in Progress 8/14
- Install Station 1 FEE's & Electronics and connect cables 8/3 8/28
- MuTr decapacitations & MuTr FEE trouble-Shooting in MMS Sta 1&3 8/3 8/28
- MuTr Rack 2 troubleshooting 8/3 8/28
- Vendor install Ar dewar & vaporizer 8/3 8/28
- Install rails and fences on gas pad 8/3 8/28
- DCM rack electric prep 8/3 8/30
- MuTr HV and FEE test and evaluation as MuTrigger FEE's & RPC's are installed 8/3 11/30
- Set up PHENIX "stage" for Summer Sunday Tour in Progress 8/7

TECHNICAL SUPPORT NOON

# Next Week 8/10 - 8/14

## Task

## Start Date End Date

- Tear down and remove PHENIX "stage" for Summer Sunday Tour 8/10 8/11
- Test base RPC3 N locking/installation fixture 8/10 8/14
- Test and commission RPC3N lifting fixtures at factory with S. Kane/designee as witness 8/10 8/14
- Erect PC1 repair tool 8/12 8/14
- Assemble HV, experimental gas and N2 gas distribution and install tent in progress 8/14
- Fabricate Base Locking/Installation fixture in progress 8/14
- Fabricate RPC3 adjustable  $\frac{1}{2}$  octant cradle in progress 8/14
- Move PHENIX-North tunnel shielding, remove PHENIX-North vapor barrier and crystal palace, repair/replace area lighting in progress 8/14
- Move MuID piping, piping supports out of Gap 5 to temporary store area in progress 8/14
- Move MuID cables and cable tray out of Gap 5 to temporary store area in progress 8/14
- Order & receive parts for gap5 N cable management in progress 8/14
- Design concept for Base locking/Installation fixture for RPC3N in progress 8/14
- Design RPC3 adjustable  $\frac{1}{2}$  octant cradle in progress 8/14
- Prep RPC3 N racks for installation in progress 8/14
- MuTr Group wants Ar/CO2 for Aug 17-28 8/14 8/28



# Next Week 8/10 - 8/14

From PK Feng:

## **1.Substation 8B**

**Date 8/12**

**Time: 1300 ~ 1600**

**On circuit 8B44, please disconnect and remove three 500 kcmil cables feeding PHENIX A/C unit 400A switch.**

**It affects PHENIX Cooling system.**

## **1.Substation 6A, 8A and 10A**

**Date: 8/13**

**Time: 900~1600**

**Perform maintenance on 13.8 kV air switches and jumper cables.**

**Visually inspect the 480V breakers and cable compartment.**

**C-AD electrician will perform wiring change and tie-in at building 1008B Main panelboard for the new 1008B building air conditioning.**

**Normal/emergency power at 6A, 8A, 10A will be available.**

## Continuing Tasks currently underway (cont'd)

Task	Start Date	End Date
• Simulated RPC installation at RPC Factory (practice/tests) commission all installation components base, locking/install, survey, cradle	in progress	8/31
• Troubleshoot MUTrigger FEE's in MMN	in Progress	8/31
• Troubleshoot MUTr decaps in MMN	in Progress	8/31
• Plan and install 2 new PHENIX gas pad expansion pads	in progress	9/4
• Spec, purchase, install and test instrumentation and monitoring, cables, etc.for rack room AC3 and new electronics water chiller	in progress	10/31
• Spec, purchase, install and test instrumentation and monitoring, cables, etc.for non-PHENIX fire alarm status panel	in progress	10/31
• Spec, purchase, install and test power wiring for new DCM racks	in progress	10/31
• Start Design supports for Beampipe upgrade	in progress	11/30
• Design & Fabrication support for VTX	in progress	11/30
• Design support for FVTX	in progress	11/30
• Design support for FOCaI	in progress	11/30
• Fan Tray replacements (as time permits)	in progress	11/30



## Continuing Tasks currently underway (cont'd)

Task	Start Date	End Date
• Test/replace rack transient suppression	7/20	12/1
• UPS feeds for GTM and GL1 racks	7/20	12/1
• Cordless phones in tunnel	7/20	12/1
• Individual relays on all HV supplies	7/20	12/1
• SF6 alarm to MCR?	7/20	12/1
• More volts to EMCAL FEM's?	7/20	12/1
• Revisit LV systemization/standardization of controls, etc.	7/20	12/1
• Correct wiring of the DCM crates enables	7/20	12/1
• Replace ECB1&2 (ADAM5000s) with a single new ADAM5000E	7/20	12/1
• Replacement OPC server computers	7/20	12/1
• Replace old PCI type RS485 interface boards with USB-Fiber and Fiber-RS485 system	7/20	12/1
• Add single-button ON/OFF controls to some LV GUIs	7/20	12/1
• Determine optimal baud rate for EC North RMC	7/20	12/1
• Remove the temporary FlatPAC in SMT4 and install two new MegaPACs	7/20	12/1

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## Continuing Tasks currently underway (cont'd)

Task	Start Date	End Date
• VTX/FVTX LV Dist system evaluation	7/20	12/1
• Prep for production of up to 39 boards in 4 crates (VTX/FVTX)	7/20	12/1
• VTX/FVTX cooling system interlock design	7/20	12/1
• Evaluate possible design for 4x1 GL1 L1 triggers	7/20	12/1
• Test direct ethernet implementaion on Maszi's new HV control interface board	7/20	12/1
• Get air conditioners installed in mixing house	7/20	12/1
• Investigate shed/larger bottles for R134A	7/20	12/1
• Replace damaged compressed air flowmeter	7/20	12/1
• Add check valves to some supply lines (as needed)	7/20	12/1
• Design and build heat exchanger for HBD system	7/20	12/1
• Re-test HBD supply line for leaks (pad to mixing house)	7/20	12/1
• Replace/ regenerate HBD purifier and driers (late Fall)	7/20	12/1
• Send mass flowmeters out for recalibration (DC/PC, MuID, TOF.W)	7/20	12/1
• Replace pad chamber flowmeters in IR, re-label	7/20	12/1
• Investigate Mutr station 2 gas loss. Confirm labeling	7/20	12/1
• Replace/upgrade gas house PC's	7/20	12/1
• Move MuID distribution panel, for future RPC access	7/20	12/1
• Re-route several gas lines in the RPC3 south gap	7/20	12/1



## Continuing Tasks currently underway (cont'd)

Task	Start Date	End Date
• Run gas lines to North tunnel	7/20	12/1
• Design and build gas humidifier	7/20	12/1
• Layout and build North distribution panel	7/20	12/1
• Run Signal/control lines to north tunnel (line goes to IR panel first)	7/20	12/1
• Build RPC gas rack for mixing house	7/20	12/1
• Install electronic and Gas PC in gas house for RPC's	7/20	12/1

TECHNICAL SUPPORT NOON

# MuTRIG Installation

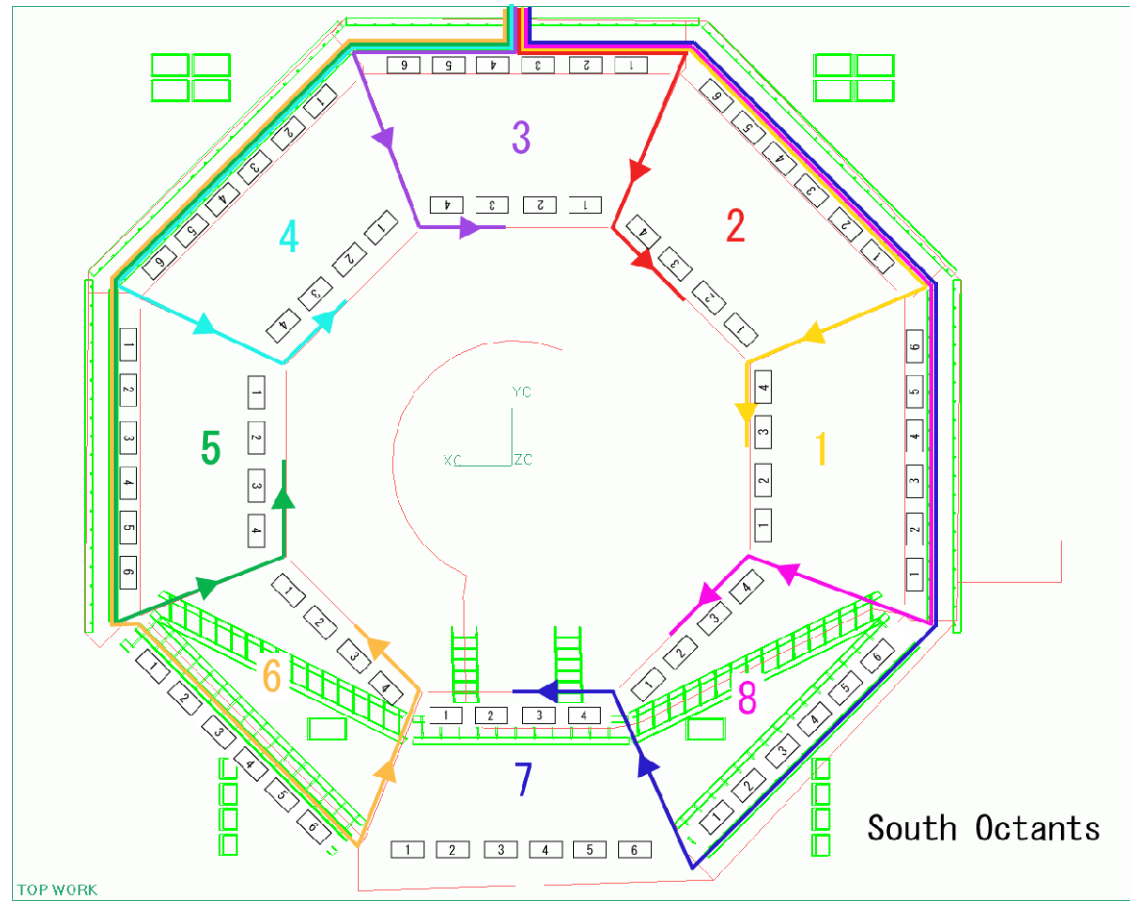
RIKEN/RBRC

Itaru Nakagawa

# Chassis Status

- All Chassis are tested and ready to install
- St-2, St-3 Chassis are installed Octant-1, 8, 7, 6, 5, 4

Station-1 Mount  
➔ Plumbing !!



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# Cabling

- Cable Tray Install underneath
  - MuTRG platform : Vertical
  - Eyebrow : for Station-2&3
- Station-1 Cable can be started running once Station-1 Scaffold is ready. **Need some unistrats for strain relief.**
- How can we run Station-2,3 Cables below eyebrow? Do we need man lift or can we work on scaffold?
- Octant 4,3,2,1 Cables need to wait until St.2&3 scaffold becomes ready.





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## Expected IR Configuration During Shutdown '09

- 7/28-10/1 MMS south, CM in run position, EC in AH  
WC in west position (against wall), scaffolding  
in station 1 and station 2/3 south
- 9/25-11/10 MMS, CM & WC positions TBD, EC in AH
- 11/10-12/1 MMS & CM in run position, EC and WC can be  
moved east west ~3 ft

These dates are approximate and subject to change



# August 10-31 Schedule

## Task

Start Date End Date

- Disassemble DC/P C1 cables & piping
- Install Station 1 MuTrigger FEE air & water and test
- Install new gap5 N cable & pipe supports, cables and piping and leak test piping
- Install RPC3 N  $\frac{1}{2}$  Octants (16 days)
- Final leak test new Ar dewar/vaporizer and Closeout job
- Move DC on EC to access PC1 east
- Install Empties racks on gas pad
- Install MuTrigger FEE station 2/3 FEE's & Electronics & connect cables
- 

8/17 8/28

8/17 9/11

8/17 9/30

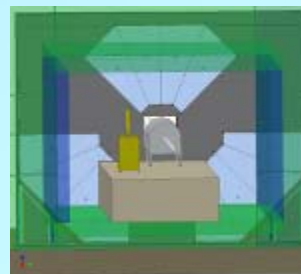
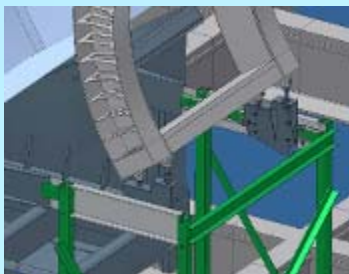
9/1 9/30

8/28 9/4

8/31 9/4

8/31 9/4

8/31 9/25

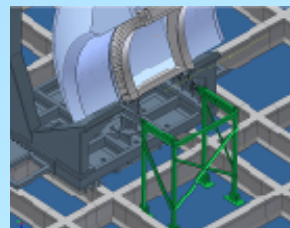


# September Schedule

## Task

Start Date End Date

- First  $\frac{1}{2}$  octant ready for installation
- Close MMN Hatch and closeout WP
- Rack room re-organization
- CM Power upgrade (as toime permits)
- Labor Day Holiday - no work
- Remove failed PC1 east module
- Install spare PC1 east module
- Install 2 RPC3 N racks (1/2 day)
- Test PC1 spare and verify operation
- Install MuTrigger FEE station 2/3 air & water plumbing and test
- Move DC on EC back to normal position
- Reconnect cables and piping on DC and PC1 East
- Remove station 1 south scaffolding
- Install LV Dist modules in MuTrigger S.
- Remove temporary MegaPAC in sRPC1 rack and install new full MegaPAC and finish controls for it
- Install rack components in RPC3 N racks
- Final verification tests on PC1 east repair



Start Date	End Date
9/1	9/1
9/1	9/1
9/1	11/30
9/1	11/30
9/7	9/7
9/10	9/14
9/10	9/14
9/8	9/18
9/14	9/17
9/14	10/9
9/18	9/18
9/21	9/25
9/21	9/25
7/20	12/1
7/20	12/1
9/21	9/30
9/28	9/30

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## October Schedule

## Task

Start Date End Date

- Disassemble and store PC1 east repair fixture 10/1 10/2
- Attach cables to RPC3 N racks and to Detector  $\frac{1}{2}$  octants 10/1 10/9
- Install new PHENIX north tunnel thermal/vapor barrier replacing crystal palace (1 week) 10/1 10/30
- DCM rack supply& Return plumbing 10/5 10/16
- Remove MMS Sta 2/3 scaffolding 10/12 10/23
- Commission RPC3 N racks and detectors 10/12 10/30
- DCM rack internal plumbing 10/19 10/30
- Reinstall MMS lampshades (2 days) 10/26 10/30





# November Schedule

## Task

## Start Date

## End Date

TECHNICAL SUPPORT NOON

- Install heaters and thermostat(s) for RPC3N thermal control 11/2 11/6
- Reinstall PHENIX North tunnel shielding (3 days) 11/2 11/6
- Cooldown for Run 10 Starts 11/7 11/7
- Move MuID Collars to IR 11/7 11/7
- Disconnect electric & Fiber in EC 11/2 11/7
- Remove ladder & dumb waiter from EC & Fold up EC platforms in AH (1 day) 11/9 11/10
- Veterans Day Holiday - no work 11/11 11/11
- Remove IR Floor plates and move 12 ton cart to AH 11/12 11/12
- Move EC to IR 11/12 11/13
- Reconnect electric and fiber to EC 11/16 11/20
- Reinstall ladder & dumb waiter on EC & Fold down EC platforms in IR (1 day) 11/16 11/20
- Pink sheets, white sheets, blue sheets 11/16 12/1
- Move MMS north, Install MuID Collars 11/23 11/25
- Assemble shield wall base and wall in AH 11/23 11/30
- Thanksgiving Holiday - no work 11/26 11/27
- Roll in shield wall 11/30 11/30
- Start Run 10, All shutdown activities completed 12/1 12/1

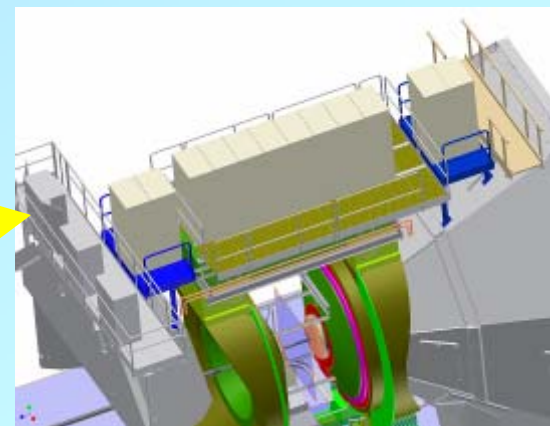


Other potential work this shutdown:

1. Remove the RPC prototype absorber

Confirmed: this to be done while  
Station 1 scaffolding is in place

2. Prep Bridge for future upgrades  
(if time permits)



## More work to be scheduled



Need to change location of hose connection: too close to electrical box

Some hoses getting old: replace before they leak



## More work to be scheduled

Purchase and install 2 AC's in  
Phenix Gas Mixing House

Suggested model ;

Mcmaster part number: 1817K89  
19.5 K btu

Per R. Pisani



## 2009 Building Maintenance Issues

- Roof leaks in utility bathroom at northwest corner behind tech offices and over door between rack room and assembly hall.
- Heat wrap tape for trailer bathroom toilet drains to prevent freeze/clogging in winter.
- Improved Rack Room AC performance (This item has been addressed time and again but unsatisfactorily. Currently the AC fails periodically and is repaired only to fail again. On-condition maintenance is not adequate...an engineered solution is needed.)
- Icy conditions at mixing house north stairs
- Mixing House loose board ?





1. ODH Posting: check for ODH posting before entering tunnel. May need to bring O2 bottle and monitor due to RHIC Cold Snake removal
2. ODH medical monitoring no longer can get extensions, need to have physical before using ODH equipment
3. CAD WOSH committee recommended allowing wearing of shorts (no measureable decrease in injuries due to ban. No shorts in AH or IR as per S. Aronson 2007 directive.)
4. Psychology study from Britain:  
*Swearing can make you feel better, lessen pain*  
  
F#\*king A, no s#\*t
5. CAD RWP for working in rad areas. If you have a TLD, go see Ann Marie at CAD and sign the generic RWP.
6. TLD's Steve, Sal, Frank (get them yet?)
7. July 16 CAD Tier 1 inspection Action Item: *Phenix trailer abandoned outside Bldg 905, needs to be re-located. [D. Lynch]*



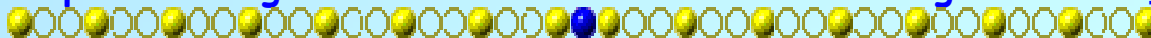
# Where To Find PHENIX Engineering Info



The Dog Days of  
Summer are here

Links for the weekly planning meeting slides, archives of past meeting slides, long term planning, pictures, videos and other technical info can be found on the PHENIX Engineering web site:

[http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL\\_SSint-page.htm](http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_SSint-page.htm)



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